

CREATING SUSTAINABLE BUILDINGS

VOLUME II.

A RESOURCE GUIDE

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CREATING SUSTAINABLE BUILDINGS

VOLUME II. A RESOURCE GUIDE

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Also see: Volume I. Creating Sustainable Buildings: Program Case Studies

INTRODUCTION

Sustainable Building

Sustainable building is a rapidly-growing field that combines architectural design and engineering with ecological knowledge in order to build and renovate structures that are not only functional and aesthetically pleasing, but are also efficient, healthy, and have the least impact on the environment. (The term “sustainable” can also encompass social and economic sustainability; however, this guide focuses on the *environmental* aspects of sustainable building.)

Because we spend approximately 90% of our time indoors, our built environment has a profound effect on our general well-being and health. We are becoming increasingly aware that many buildings have poor air quality due to inadequate ventilation or toxic fumes or particles from building materials or interior finishes (such as carpeting). It is estimated that 30% of new and renovated buildings in the U.S. have poor indoor air quality.¹ Workers have 20% fewer sick building symptoms when they work near windows, within range of natural light infiltration or natural ventilation.²

Furthermore, how we create, or “grow,” our buildings has a profound effect on the natural environment around them. Consider the following information:

- Buildings account for 30% of U.S. CO₂ emissions.³
- Buildings consume over 40% of the energy used in the U.S., including 60% of our electricity.⁴
- 20--30% of North American landfill space is taken up by construction and demolition debris. At least half of this waste could have been recycled. ⁵

Sources:

1. Worldwatch Institute; cited in Austin Green Builder Program website.
2. Vivian Loftness, Dean, Department of Architecture, Carnegie Mellon University
3. Build Boston November 21, 1996 workshop on green building products
4. Austin Green Builder Program Sustainable Building Guidelines
5. Worldwatch Institute; cited in Austin Green Builder Program website.

Sustainable design is a process of trying to reduce these impacts through product design and selection of appropriate products and technologies. Many of the issues that sustainable design addresses fall into the following categories:

- site selection and land impact minimization
- energy efficiency and conservation
- water conservation
- recycling of construction site materials
- efficient use of building materials
- building materials: production impacts, durability, toxicity, recycled content, recyclability, and embodied energy
- climate-appropriate landscaping
- indoor air quality

Sustainable building can consist of a wide variety of measures, spanning the spectrum from traditional or commonplace to extremely innovative or experimental. For example, rainwater catchment systems have been around for centuries and are simple to understand and use. And energy efficiency equipment makes use of more modern technologies that are now widely accepted and used in retrofits of existing structures and in new construction. Greywater recycling systems, on the other hand, have not yet become mainstream.

Objectives of the Resource Guide

Numerous public, private, and non-profit activities and publications related to sustainable building have emerged in recent years. This guide is meant to serve as a reference directory for finding resources on sustainable building. Though it could be of interest to various people, it is intended to be used by staff in various agencies within the Commonwealth of Massachusetts, as they begin to consider developing a sustainable building program or project for state-owned buildings that goes beyond existing environmental programs (such as recycled materials purchasing and energy conservation).

At the beginning of each major section of the guide, there is a description of the information contained within that section. Because this project is focused on public buildings, references to resources with a purely residential focus were kept to a minimum. Under each resource listed in the guide, you will find a brief list of keywords (see below), information on where to get further information, and a paragraph-long description of what the resource has to offer.

This guide should in no way be seen as an exhaustive listing of resources on sustainable building, and inclusion of the resources in the guide does not constitute an endorsement of their activities, services, or products.

The development of this guide was solicited by Eric Friedman of the Operational Services Division and Sarah Hammond-Creighton of the Division of Capital Planning and Operations, and was carried out from February through April 1998 by three graduate students in Tufts University's Department of Urban and Environmental Policy.

This guide was developed in conjunction with two case studies of municipal sustainable building initiatives: the Green Builder Program in Austin, Texas and the Los Angeles Citywide Sustainable Building Task Force. These case studies are in a separate volume.

Keyword Key

Each resource entry contains a selection of the following keywords, which describe the type of information provided by the resource. Some keywords are more self-explanatory than others, so brief descriptions follow:

<u>KEYWORD</u>	<u>TYPE OF INFORMATION</u>
GENERAL	General Information
CONCEPTUAL	Conceptual Information
TECHNICAL	Technical Information (i.e. R&D, design specifications, life cycle analysis and other tools)
PUBLIC	Public Buildings
PRIVATE	Private Buildings (Residential, Commercial, and/or Industrial)
IMPLEMENTATION	Implementation Strategies
CASE STUDIES	Case Studies
EFFICIENCY	Resource Efficiency (i.e. energy, water)
MATERIALS	Building Materials (i.e. construction waste, recycling, products)
INDOOR	Indoor Air Quality (non-toxics)
LANDSCAPING	Landscaping (climate-appropriate)
LAND USE	Land Use / Urban Planning (siting, zoning, habitats)
MASSACHUSETTS	Based in Massachusetts
NORTHEAST	Based in ME, NH, VT, RI, CT, NY, or PA

I. GOVERNMENT PROGRAMS

The programs listed in this section do not represent all governmental efforts relating to sustainable building. A number of other programs probably exist, but have not been publicized to the extent that the listed programs have. This listing also does not include the many specific governmental programs that touch on sustainable building issues (i.e. environmental building materials procurement), but rather includes those programs that claim to have a sustainable building focus.

Federal Programs

Department of Energy Office of Building Technology: State and Community Programs

EFFICIENCY
TECHNICAL
IMPLEMENTATION
PUBLIC
PRIVATE

Energy Efficiency and Renewable Energy
Program
P.O. Box 3048
Merrifield, VA 22116
1-800-DOE-EREC
<http://www.eren.doe.gov/buildings/>

This office provides technical and financial assistance for state and community programs. Initiatives include: Rebuild America (community-based partnerships for retrofitting commercial buildings); Buildings for the 21st Century (which includes the Million Solar Rooftops program); and the Green Building Challenge (see listing below).

Department of Energy Center of Excellence for Sustainable Development

EFFICIENCY
TECHNICAL
IMPLEMENTATION
PUBLIC

Energy Efficiency and Renewable Energy
Program, Denver Office
1617 Cole Boulevard
Golden, CO 80401
800-363-3732 or 303-231-7903
FAX: 303-275-4830

sustainable.development@hq.doe.gov
<http://www.sustainable.doe.gov/>

The Center of Excellence for Sustainable Development helps community's identify sources of technical and financial assistance to carry out their programs, and provides information on planning and implementation. Its field office in Golden, CO is called the Solar Energy Research Institute (SERI): SERI's Technical Inquiry Service (TIS) is the DOE's technology bank.
See Websites section.

Environmental Protection Agency Energy Star Buildings Program

PUBLIC
PRIVATE
EFFICIENCY
TECHNICAL
IMPLEMENTATION

Atmospheric Pollution Prevention
Division
401 M Street SW (6202j)
Washington, DC 20460
<http://www.epa.gov/appdstar/buildings>

The Energy Star Buildings Program is a voluntary energy efficiency program for commercial buildings that focuses on profitable ways in which building owners can cut energy outlays. The cornerstone of the program is a five step implementation process that provides technical assistance and flexibility in achieving energy use reductions. Recently, the Energy Star Buildings Upgrade Manual was published, which is an technical implementation manual for Energy Star partners to utilize.

The manual is available on the Energy Star webpage. The city of Cambridge is an official Energy Star Buildings Partner.

**Environmental Protection Agency
Sustainable Development Challenge
Grant Program**

*GENERAL
PUBLIC
CONCEPTUAL*

US EPA Region I (CSP)
JF Kennedy Federal Bldg.
Boston, MA 02203
617-565-3551
<http://www.epa.gov>
Contact: Rosemary Monahan

This grant program was initiated by President Clinton in 1995 as part of the National Performance Review's Reinventing Environmental Regulation Initiative. The program's goal is to foster locally-based sustainable building projects, including green building projects, as part of a larger federal effort to integrate environmental protection and economic goals at the community level. State and local governments, as well as non-profit groups are eligible. Grants require a 20% match and additional leveraging is encouraged. Projects are evaluated on criteria of sustainability, community commitment and contribution, and measurable results.

Green Building Challenge '98

*PUBLIC
PRIVATE
TECHNICAL
CASE STUDIES
EFFICIENCY
MATERIALS*

GBC '98 Secretariat
13th Floor, 580 Booth Street
Ottawa, Ontario K1A 0E4, Canada
<http://eren.doe.gov/buildings/gbc98/gbc98.htm>
<http://www.greenbuilding.ca/gbc98>

The U.S. Green Building Challenge sponsors include EPA, DOE, and AIA. This two-year long international green building competition has the following aims: to test new methods of assessing building performance, establish international benchmarks for sustainable building, showcase the best examples of green buildings internationally, document the successful design and performance of greener buildings, offer extension efforts for developing regionally specific assessment models, and advocate green building efforts through information dissemination and public education.

The Challenge will culminate in the GBC Conference in Vancouver, British Columbia, October 26-28, 1998. Proposed technical papers will address themes of policy issues, performance assessment, or building design for high performance. At the conference, results of detailed assessments of 24 showcase green buildings will be unveiled. (U.S. projects include the EPA's Research Triangle Park Facility in North Carolina, Cambridge Co-Housing in Cambridge, Massachusetts, and San Diego's Ridgehaven Demonstration Building.) The criteria for these performance assessments will be embedded in the new methodological framework established by GBC after this two year process of development. The end result should be a standardized yet flexible set of new design guidelines for green building that incorporates regional differences related to climate, resources, economics and culture.

State and Regional Programs

North Carolina: Green Building Initiative

*PRIVATE
GENERAL
MATERIALS
CASE STUDIES*

NC Recycling Association
NC Green Building Council
7330 Chapel Hill Road Suite 207
Raleigh, NC 27607
919-851-8444
FAX: 919-851-6009
<http://www.recycle.net/recycle/ncra/>

Starting as an initiative to spread information about green building to the private sector, North Carolina's Green Building Initiative was funded as an ad hoc project to:

- conduct a needs assessment survey of the building industry
- launch the annual Southeastern Green Building Conference and Exhibition
- set up a workshop series for architects
- publish a comprehensive Green Building Products and Materials Resource Directory.

In 1997, once all of these tasks had been accomplished, responsibility for administration was transferred to the North Carolina Energy Division, which, in conjunction with the NC Recycling Association, maintains the work of the initiative, keeps the website updated, and acts as an information clearinghouse for builders and homeowners. The program relies on a mixture of directed educational campaigns, literature dissemination, and private sector marketing about the cost-effectiveness of mainstream green building techniques to promote acceptance for sustainable building.

North Carolina: Triangle J Council of Governments Construction and Demolition Waste Task Force

*PUBLIC
PRIVATE
TECHNICAL
MATERIALS
CASE STUDIES*

Triangle J. Council of Governments
100 Park Drive
P.O. Box 12276
Research Triangle Park, NC 27709
919-549-0551
FAX: 919-549-9390
<http://www.tjcog.dst.nc.us/TJCOG>
Contact: Judy Kincade
*CONTACT ONLY FOR RESOURCES
LISTED*

Triangle J is a regional planning organization within a 6 county area. The C&D Task Force is represent a diversity of stakeholders in the field of planning and construction. They have published *WasteSpec*, a manual with model specification and background info. on waste reduction, reuse, and recycling before and during C&D. Also available through this office: "Using Specifications to Reduce Construction Waste", a collection of case studies on how *WasteSpec* was utilized during various projects, including the renovation of Four Times Square. Case studies are especially useful in highlighting cost effectiveness of reducing construction waste. A video on deconstructing and recycling elements of old buildings, "Old Buildings Don't Have to Go to Waste", \$25 through Triangle J.

Oregon: METRO—Portland area regional planning government

PUBLIC
PRIVATE
GENERAL
CASE STUDIES

Regional Environmental Management
600 NE Grand Avenue
Portland, OR 97232
503-797-1663
FAX: 503-797-1795
Contact: Brice Jacobson,
Waste Reduction Specialist

METRO is a progressive planning government for the Portland, OR region; they publishes Earth-Wise Builder Publications and videos on sustainable construction issues, and several case studies on green building projects. Most of these resources are free or at nominal cost. In building their headquarters, they used 160 tons of salvaged material, recycled drywall, metal, cardboard, and wood.

Local Programs

Austin, TX: Green Builder Program

PUBLIC
PRIVATE (ALL TYPES)
GENERAL
TECHNICAL
EFFICIENCY

Planning, Environmental & Conservation
Services Department
206 E. 9th Street, Suite 17.102
Austin, TX 78767
512-499-7827 or 512-499-3541
FAX: 512-499-2859
jill_mayfield@greenbuilder.com
<http://www.ci.austin.tx.us/greenbuilder>

Austin's Green Builder Program was one of the first comprehensive, governmental sustainable building programs. The program addresses municipal, residential, and now commercial buildings. Sustainable Building Guidelines are incorporated into the construction and operation of all municipal buildings. *See case study in Volume I for thorough description.*

Boston, MA: Sustainable Boston

MASSACHUSETTS
IMPLEMENTATION

Environmental Services, City of Boston
City Hall, Room 805
Boston, MA 02201
617-635-0346
FAX: 617-635-0383
<http://www.ci.boston/urbanenvironment/sustainable.htm>
Contact: Geeta Pradhan, Director

Sustainable Boston is a collaborative effort of Environmental Services and the Public Facilities Department. The initiative focuses on public health, education, economic development, and public safety, in addition to greening the built environment. In 1996, Sustainable Boston sponsored a public lecture and forum on green building. They are working in partnership with community development groups like Urban Edge on multi-family housing, and with the Boston Redevelopment Authority, and the U.S. EPA.

Boston, MA: Rebuild Boston Energy Initiative

MASSACHUSETTS
EFFICIENCY
IMPLEMENTATION

Peregrine Energy Group, Inc.
77 North Washington Street
Boston, MA 02114
617-367-0777 x26,
FAX: 617-367-6299
<http://www.neec.org/rebuild/home.html>
Contact: Joe Mellusi, Project Manager
jmellusi@peregrinegroup.com

Project partners include the U.S. DOE, U.S. EPA, City of Boston, MA Division of Energy Resources, Northeast Energy Efficiency Council, and many other groups and agencies. The project aims to obtain financing for energy and water conservation investments for owners of commercial, institutional, or multi-family residential property in the city. The project is expected to stimulate \$50 million in investment for improvements to existing buildings.

**Kitsap County, WA:
Build a Better Kitsap**

*PRIVATE (RESIDENTIAL ONLY)
GENERAL
TECHNICAL
CASE STUDIES
MATERIALS
EFFICIENCY*

Kitsap County Department of Public Works
614 Division Street
Post Orchard, WA 98366-4699
Contacts:
Dave Peters, Recycling Coordinator
360-895-4898
FAX: 360-895-4867
Kathleen O'Brien, Program Consultant and
chief author of program guidelines
206-842-8995
Art Castel, Home Builders Association of
Kitsap County, Program Administrator
360-479-5778

Build a Better Kitsap is primarily a residential, private incentive based program to encourage the construction of greener homes in Kitsap County. Administered by the Home Builders Association of Kitsap, the program is set up as a three tiered rating program for home resource efficiency, quantified by a point system of "action items" that corresponds to a variety of sustainable building features. Some of the points are required, others are at the discretion of the builder. The entire program relies on self-certification. These elements make the Kitsap program very flexible and inexpensive to administer for the small country. The program manual is available for \$250, and the checklist of "action items" is \$25 through the DPW.

Build a Better Kitsap County will be expanding into the area of light construction in 1998. Two non-residential projects and case studies have already been completed in the county, a 68,000 square foot Central Market and an industrial facility to be used for hazardous

waste collection from households and small quantity generators. Both projects utilized a number of recycled and environmentally preferable building products. Case study fact sheets are available for free, and a video on the planning and construction of the Central Market is available from the DPW.

*The program has been replicated, with a few minor changes, in Clark County, WA- "Build a Better Clark Country". Similar HBA programs in Denver, Austin, Central New Mexico, and Suburban Maryland Building Industry Association. See:
<http://www.nahbrc.org/seminars/green.htm>*

**Los Angeles, CA:
Citywide Sustainable Building
Task Force**

*PUBLIC
PRIVATE
GENERAL
TECHNICAL
EFFICIENCY*

Bureau of Engineering
Architectural Division
600 Spring Street
Los Angeles, CA 90014/MS 507
213-847-6370
FAX 213-847-5300
Contact: Bill Holland, City Architect, Task
Force Chairman

The Citywide Sustainable Building Task Force has been working on green building issues in Los Angeles since 1995. The Task Force is comprised of staff from a multitude of city agencies, as well as local non profit organizations and architects. It is focused on three building sectors: city owned sites, city influenced sites, and private developments. The Task Force is developing specific programs to implement sustainable building within each of these sectors. In order to simply their mission for

builders, the Task Force has published a reference manual that combines suggested green building guidelines with the required building ordinances.

See case study in Volume I for thorough description.

**New York, NY:
High Performance Building Program**

*PUBLIC
NORTHEAST
GENERAL
CASE STUDIES
IMPLEMENTATION*

Dept. of Design and Construction
Office of Sustainable Design and
Construction
30-30 Thomson Ave
Long Island City, NY 11101
718-391-1371
FAX: 718-391-1477
Contact: Hillary Brown, Assistant
Commissioner, Structures Division

The High Performance Building program is a broad, multi-tasked approach to bring green building features into the mainstream of New York's city-owned and city-controlled facilities. Selected green building elements that are now being incorporated include: energy efficiency, pollution and waste reduction, IAQ, and resource conservation.

New York City is utilizing a combination of demonstration projects, education and outreach, and policy tools such as subsidized energy efficiency upgrades to meet green building goals. The program has developed its own guidelines and matrix for measuring municipal benefits from green building, which utilized tools such as life cycle cost analysis to accurately project savings from greener building.

**Oakland, CA:
Working Group for a Sustainable
Community**

*PUBLIC
PRIVATE
EFFICIENCY
CASE STUDIES*

7101 Edgewater Drive
Oakland, CA 94621-3001
510-615-5421
FAX: 510-615-5411
Contact: Scott Wentworth, Energy
Engineer

Oakland's approach is different in that a number of sustainable building projects have been completed, especially in the area of energy efficiency, without the auspices of a traditional program. Completed projects include the utilization non-toxic building materials into new construction, and the incorporation of advanced energy efficiency systems into Oakland's new administration facilities. Recently, efforts have commenced to organize the green building efforts of a number of city agencies, including the Community and Development Agency and the city's architects and engineers, into a working group.

**Portland, OR:
Sustainable Tomorrow Program**

*MATERIALS
EFFICIENCY
PUBLIC
PRIVATE
CASE STUDIES*

Energy Office, or
Solid Waste and Recycling Office
Pack West Building
1211 SW 5th Street
Portland, OR 97204
503-823-7418 (Energy)

503-823-7202 (Solid Waste)

Several public and private green building projects have been undertaken in Portland, including 2 parks/aquatics centers, water pollution control lab, new sports and entertainment complex, homes, etc. 45,000 tons of construction waste have been recycled for the Oregon Arena complex, saving \$187,000 in landfill tipping fees so far. Recycling of construction site waste is required for any building project with a total job cost over \$25,000.

**San Diego, CA:
Green Building Projects**

*PUBLIC
PRIVATE
EFFICIENCY
MATERIALS
CASE STUDY*

City of San Diego
Environmental Services Department
9601 Ridgehaven Court
San Diego, CA 92123
619-492-5009
FAX: 619-492-5021
<http://www.sannet.gov/environmental-services/ridgehaven.html>

The city has renovated a municipal office building (Ridgehaven) into a state-of-the-art green facility with low long-term operating costs. The project includes energy efficiency, indoor air, and recycled content materials improvements. It has led to energy savings of over \$80,000 per year (a 67% cut). The city also has voluntary green building guidelines for new construction and renovation projects; they focus on energy and resource efficiency and waste minimization.

**San Francisco, CA
Green Building Program**

*PUBLIC
PRIVATE
IMPLEMENTATION
EFFICIENCY
MATERIALS*

1150 Market Street, Fourth Floor
San Francisco, CA 94103
415-554-3175
FAX: 415-554-3138
Contact: John Deakin, Director of Bureau of Energy Conservation

San Francisco has been working on issues of sustainability in building since 1980, especially in the area of resource efficiency. The city has incorporated the Green Building Council's Leadership in Energy and Environmental Design (LEED) program, which is a standardized rating system used to evaluate construction projects by sustainability criteria. The city has also published its own guidelines, and the Bureau of Energy Conservation is working on getting an ordinance passed that would further promote green building. Outreach programs are in place to educate agency staff on sustainability issues, and city engineers and architects currently receive technical training in green building design and construction.

Santa Monica, CA: Sustainable Building Development Guidelines
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*PUBLIC
PRIVATE
IMPLEMENTATION*

City of Santa Monica
Environmental Programs Division
200 Santa Monica Pier
Santa Monica, CA 90405
310-458-2227
FAX: 310-393-1279
Contact: Dean Kubani
dean-kubani@ci.santa-monica.ca.us

Consultants have completed a second draft of Santa Monica's comprehensive and progressive Sustainable Building Development Guidelines for municipal, commercial, and multi-family residential buildings. The project is being jointly managed by the Environmental & Public Works Management and the Planning & Community Development departments. A technical advisory committee is reviewing the draft and getting more public input. The final guidelines are expected to be completed by fall of 1998.

II. ORGANIZATIONS AND ASSOCIATIONS

The Related Organizations listed in this section all address some aspect of sustainable building in their work, but do not have it as their primary or general mission. For instance, many focus on specific issues like energy efficiency in buildings, and others focus on sustainability issues in general.

Sustainable Building Organizations

Center for Maximum Potential Building Systems, Inc.

*TECHNICAL
CONCEPTUAL
EFFICIENCY
MATERIALS*

8604 FM 969
Austin, TX 78724
512-928-4786
FAX: 512-926-4418
max_pot@greenbuilder.com
<http://www2.cmpbs.org/cmpbs/>
Contact: Pliny Fisk, Co-Director/
Research Architect

Non-profit education, research, and demonstration organization focusing on the application of appropriate building and resource technology to a range of users, from regional planning and natural resource agencies to individual homeowners.

Center for Resourceful Building Technology

*TECHNICAL
CASE STUDIES
GENERAL
MATERIALS*

P.O. Box 3413
Missoula, MT 59806
406-549-7678
crbt@montana.com
<http://www.montana.com/crbt/mis.html>
Contact: Steve Loken

Informs the public about resource-efficient building materials and technologies through research, education, and demonstration. Publishes a Guide to Resource Efficient Building Elements, which is updated each year.

Center for Sustainable Building and Technology

*MASSACHUSETTS
RESIDENTIAL
CASE STUDIES
GENERAL*

221 Concord Ave.
Cambridge, MA 02138
617-868-7788
Contacts: Diane Cotman,
David Del Porto, Chuck Redmon

Coordinating the pilot Sustainable Housing Demonstration Project at 136 Appleton Street, Cambridge. Tours will be given. The organization also works with Homeowner's Rehab and the Conservation Services Group on contractor and worker education programs.

Green Building Information Council (GBIC)

*GENERAL
TECHNICAL*

130 Lewis Street
Ottawa, Ontario K2P 0S7, Canada
613-232-2330
FAX: 613-232-7018
<http://greenbuilding.ca/GBIC.html>

Non-profit Canadian organization affiliated

with the University of British Columbia.
Extensive international links. Specializes in
energy efficiency and environmental
performance of buildings.

Interior Concerns Environmental Resources, Inc.

INDOOR MATERIALS

131 West Blithesdale Ave.
Mill Valley, CA 94941
415-389-8049
FAX: 415-388-8322
<http://www.interiorconcerns.org>
Contact: Victoria Schomer
vschomer@interiorconcerns.org

Interior Concerns is a non-profit committed
to fostering a global understanding among
professionals and the public of sustainable
designing and building practices.
See listings in Websites and Vendor
Directories sections.

IRIS Communications, Inc.

TECHNICAL EFFICIENCY GENERAL

P.O. Box 5920
Eugene, OR 97405
541-484-9353
FAX: 541-484-1645
iris@oikos.com
<http://www.oikos.com>
Contact: Bruce Sullivan

Private company that provides high-quality
information on sustainable buildings and
energy efficiency. Has publications,
databases, videos, and software.

Sustainable Building Coalition

GENERAL

3102 Breeze Tr.
Austin, TX 78722
512-499-2458 ; or 499-0526
<http://www.greenbuilder.com/sbc/>
Contacts: Sue Barnett, Linda Shaw

Membership group organized in 1992, in
part by advisors to Austin's Green Building
Program (see Local Programs section, and
Case Study in Volume I), to share
information and educate the community on
sustainable building.

U.S. Green Building Council

GENERAL

90 New Montgomery Street, Suite 1001
San Francisco, CA 94105
415-543-3001
FAX: 415-957-5890
info@usgbc.org
<http://www.usgbc.org>
Contact: Kristin Ralff, San Francisco Office,
415-543-3001

Non-profit coalition of building-product
manufacturers, environmental groups,
building owners and operators, architects,
engineers, utilities, state and local
governments, and universities. Information
clearinghouse. Hosts an annual
conference. The GBC's LEED (Leadership
in Energy and Environmental Design)
program is a voluntary, market-driven
building rating system that evaluates
environmental performance of an entire
building over its life cycle. LEED is
intended to be a definitive standard for
"green buildings."

Related Organizations

American Council for an Energy-Efficiency Economy (ACEEE)

EFFICIENCY

1001 Connecticut Avenue NW, Suite 801
Washington, D.C. 20036
202-429-8873
FAX: 202-429-2248
info@aceee.org
http://aceee.org

Sponsoring a conference/course on energy efficiency in buildings in August this year (1998) in Pacific Grove, CA.

CWC: Clean Washington Center

MATERIALS IMPLEMENTATION

999 Third Avenue, Suite 1060,
Seattle, WA 98104
206-464-7040
FAX: 206-464-6902
http://www.cwc.org

Non-profit (previously governmental entity) dedicated to creating markets for recycled materials. Has several publications related to construction materials.

The Conservation Consortium

MASSACHUSETTS TECHNICAL EFFICIENCY

4380 Main Street
Yarmouth Port, MA 02675

508-362-2484
FAX: 508-362-4970
consort@capecod.net

Expertise on alternative technologies, including wind energy systems, heat exchangers, wastewater systems, etc.

E-Source

EFFICIENCY

1033 Walnut Street
Boulder, CO 80302
303-440-8500
FAX: 303-440-8502
esource@esource.com

Membership-based clearinghouse for information on energy end-use technologies. A subsidiary of the Rocky Mountain Institute.

Lawrence Berkeley National Laboratory Center for Building Science Energy & Environment Division

EFFICIENCY TECHNICAL

UC Berkeley
Center for Building Science
Mailstop 90-3058
1 Cyclotron Road (Bldg. 90)
Berkeley, CA 94720
510-486-4835
FAX: 510-486-5394
http://eande.lbl.gov/cbs/exroads/
EnergyXroads.html

Cutting-edge energy efficiency research, with a Green Building component.

Lighting Research Center (LRC)

*EFFICIENCY
TECHNICAL*

Rensselaer Polytechnic Institute
Troy, NY 12180
518-276-8716
FAX: 518-276-2999
lrc@rpi.edu
<http://www.lrc.rpi.edu>

Cutting edge research and evaluation of
new energy-efficient technologies.

Public Technology, Inc. (PTI)

*IMPLEMENTATION
PUBLIC*

1301 Pennsylvania Avenue NW, Suite 800
Washington D.C. 20004
202-626-2400 or 800-852-4934
FAX: 202-626-2498
<http://pti.nw.dc.us>

Non-profit technology R&D organization of
the National League of Cities, National
Assoc. of Counties, and International City-
County Management Association. Works
closely with the EPA, DOE, and other
research organizations to help local
governments build sustainable facilities.
Published the Local Government
Sustainable Buildings Guidebook and has
several other related publications.

*GENERAL
CONCEPTUAL
EFFICIENCY*

1739 Snowmass Creek Road
Snowmass, CO 81654-9199
970-927-3851
FAX: 970-927-3420
<http://www.rmi.org/gds/index.htm>
Contacts: Bill Browning, head of green
development research;
Amory Lovins, L. Hunter Lovins,
founders

Pioneering non-profit research and
educational organization for advanced
green development, transportation, and
energy efficiency. Publishes a number of
books on related optics and is generally
considered one of the leading authorities in
the field. Their Green Development
Services provide consulting on projects
(including the solar Sydney 2000 Olympic
Village and other high-profile
developments).

Rocky Mountain Institute

TECHNICAL

Professional Associations

American Institute of Architects (AIA) Committee on the Environment (COTE)

*TECHNICAL
IMPLEMENTATION
CASE STUDIES*

800-242-3837 or 202-626-7482
<http://www.e-architect.com>
pia@aiaemail.aia.org
Contact: Gail Lindsey, Chair
c/o Design Harmony
4429 Trammel Ct.
Wake Forest, NC 27587
DHArArch@aol.com

Working on the Green Building Challenge, the Greening of the White House, and in various design charrettes for specific projects.

Architects, Designers, and Planners for Social Responsibility (ADPSR)

*GENERAL
TECHNICAL*

P.O. Box 9126
Berkeley, CA 94709
510-273-2428

Non-profit organization of design professionals, focusing on responsible ways to protect the natural and built environment.
See next listing.

Architects for Social Responsibility (ASR)

*GENERAL
TECHNICAL
MASSACHUSETTS*

Boston Society of Architects (BSA)
52 Broad Street
Boston, MA 02109
617-951-1433 or 800-662-1235
FAX: 617-951-0845
Contact: Peter Nobile, AIA, Co-Chair
617-423-1700 x251
prn251@sbra.com
Marilyn Phelan, Co-Chair

An affiliate of Architects, Designers, and Planners for Social Responsibility (ADPSR). Co-publisher of the Sourcebook for Sustainable Design (Ed. Andrew St. John); currently working on a revised Sourcebook or related project. The group meets at 6:00 p.m. on the fourth Tuesday of every month at the BSA (Boston Society of Architects) building. The BSA also has an Indoor Air Quality Committee.

National Association of Home Builders (NAHB) Research Center

*CASE STUDIES
IMPLEMENTATION
PRIVATE (RESIDENTIAL)*

400 Prince George's Blvd.
Upper Marlboro, MD 20772-8731
301-249-4000
<http://www.nahbrc.org/seminars/green.htm>

Constructed Resource Conservation
Demonstration House. Great website.

Northeast Energy Efficiency Council

*EFFICIENCY
IMPLEMENTATION
MASSACHUSETTS*

77 North Washington Street
Boston, MA 02114
617-367-6144
FAX: 617-367-6299
info@neec.org
<http://www.neec.org>
Contact: Paul Groemer

A business association of the energy efficiency industry, its mission is to promote energy efficiency policies, programs, and technologies. They publish a directory of product and service providers, and are involved in the Rebuild Boston Energy Initiative with the City of Boston and the U.S. Department of Energy.

Quality Building Council

*EFFICIENCY
CASE STUDY
MASSACHUSETTS*

50 Miles Street
Greenfield, MA 01301
413-774-6051
FAX: 413-774-6053
nesea@nesea.org
<http://www.nesea.org>

Non-profit membership organization focusing on renewable and sustainable energy use. Their Quality Building Council is made up of builders, contractors, architects, tradespeople, planners, and others. They maintain a list of architects in the region who are involved in sustainable design. They share information, issue a Guide to Sustainable Energy Resources, and participate in the ongoing design, renovation, and operation of the Northeast Sustainability Center in downtown Greenfield.

Northeast Sustainable Energy Association (NESEA):
--

University Research Programs

Massachusetts Institute of Technology Department of Architecture & Planning Sustainable Building Programs

*TECHNICAL
CONCEPTUAL
MATERIALS
EFFICIENCY
MASSACHUSETTS*

77 Massachusetts Avenue
Cambridge, MA 02139
617-253-7791
<http://destec.mit.edu/forum>
Contact: Andrew Scott, Associate
Professor
amscott@mit.edu

Held the 1997 Dimensions of Sustainability International Symposium, with the Alliance for Global Sustainability. The department has various courses, seminars, and workshops on environmental sustainability. Andrew Scott has worked on developing a database of projects and technologies in environmental building design.

Carnegie Mellon University Department of Architecture Green Design Initiative

*TECHNICAL
CONCEPTUAL
GENERAL
NORTHEAST*

5000 Forbes Avenue
Pittsburgh, PA 15213
412-268-2299
ncOy@andrew.cmu.edu
Contact: Noellette Conway-Schempf, Ph.D.
Executive Director; or
Vivian Loftness, Head of the
Department of Architecture

Helps form partnerships with corporations, foundations, and government agencies to develop joint research and education programs for environmentally-conscious engineering, product and process design, and architecture. The Department of Architecture has also constructed an Intelligent Workplace office building on campus, in which they can assess the performance of innovative building products through post-occupancy research. Publications available.

III. CONSULTANTS AND FIRMS

Most of the architects and engineers included in this section work in the New England region. Those who do not are included because they are recognized as national leaders in sustainable building design. Many of the firms listed here are affiliated with or have been mentioned or recommended by the Environmental Building News, the Architects for Social Responsibility group in Boston, and/or have been self-publicized on the web.

This is by no means a comprehensive listing of all design consultants in the region, nor is it an endorsement of any of these firms.

Architects/Designers

John Abrams **South Mountain Company, Inc.**

P.O. Box 359
Chilmark, MA 02535
508-645-2618
FAX: 508-645-3182

South Mountain Co. is a design/build firm that does work on Martha's Vineyard. He is also on the Environmental Building News (EBN) Advisory Board, and is part of the ARC Design Group, along with architect Bruce Coldham and engineer Marc Rosenbaum. He has expertise in resource efficient construction materials.

Franziska Amacher **Amacher & Associates**

P.O. Box 380792
One Chapman Place
Cambridge, MA
617-354-8707

She is the former Co-Chair of the Architects for Social Responsibility group of the Boston Society of Architects.

Bruce Coldham **ARC Design Group**

155 Pine Street
Amherst, MA 01002
413-549-3616
FAX: 413-549-6902
bruce@codhamarch.com

Bruce Coldham is on the EBN Advisory Board, as well, and works with John Abrams and Marc Rosenbaum. Their past projects include the highly-advanced Wampanoag Tribal Building in Gay Head, Martha's Vineyard, MA, and Stonyfield Farm Inc's new offices. They are currently working on the Northeast Sustainable Energy Association's Sustainability Center in Greenfield, MA.

Randolph Croxton **Croxton Collaborative Architects**

475 5th Avenue, 22nd Floor
New York, NY 10017
212-683-1998
FAX: 212-683-2799
croxtonarc@aol.com

His firm has expertise in sustainable design. They designed the Natural Resource Defense Council's headquarters in Washington, D.C. and the Audubon House in New York.

David Gardner **Eco-Renovations**

13 Plain Street
Easthampton, MA 01027
413-529-0741
ecoren@javanet.com

His firm provides residential building and remodeling design and consulting services.

Gerard Ives
Gerard Ives Architects

One Dartmouth Place
Boston, MA 02116
617-266-1899

He designed the Sustainable Housing Demonstration Project home in Cambridge and the Massachusetts Audubon Wildlife Sanctuary Visitor Center in South Wellfleet, MA, among other sustainable buildings.

Mary Kraus, Architect

120 Pulpit Hill Road
Amherst, MA 01002
413-549-5799

The primary focus of her business is healthful, ecologically sound design. She specializes in co-housing communities, but has also been a consultant on institutional projects.

Henry MacLean
Timeless Architecture

147 School Street
Milton, MA 02186
617-696-6448
timearch@aol.com

He has proposed a sustainable renovation design for Boston City Hall and Plaza. He also teaches at the Wentworth Institute of Technology.

William McDonough
William McDonough & Partners

410 E. Water Street
Charlottesville, VA 22902
804-979-1111
FAX: 804-979-1112

He is Dean of the University of Virginia School of Architecture; he designed the Oberlin environmental studies building. Received the Presidential Award for Sustainable Development; and he is the author of the Hannover Principles/Design for Sustainability, the official design guidelines for the 2000 World's Fair.

Richard Moore, Architect

40 Prescott Street
Brookline, MA 02146
617-566-7567
FAX: 617-566-7567
ricm@world.std.com

He has conducted workshops on green building products at the annual Build Boston convention.

Andrew St. John
Sustainable Strategies

76 Forest Avenue
Essex, MA 01929
617-563-3019

He is the editor of *The Sourcebook for Sustainable Design*, put out by the Boston Society of Architects. He has held many workshops on sustainable design in the area. He served as Building Materials Specification Architect on the Sustainable Demonstration Housing Project in Cambridge.

Engineers

David Del Porto **ECOS/Sustainable Strategies**

152 Commonwealth Avenue,
Concord, MA 01742-2968
978-369-9440
FAX: 978-369-2484
sustainable@aics.net
<http://www.ecological-engineering.com>

His firm provides ecological engineering services and technologies for wastewater treatment and utilization, such as zero-discharge systems.

Mark Kelley **Building Science Engineering**

85 Depot Road
Harvard, MA 01451
508-291-7666; or 508-456-6950
dragon@world.std.com
<http://www.greenvillage.com/greenvillage>

He is a professional engineer specializing in environmental sustainability and energy in buildings. He's also on the Environmental Building News (EBN) Advisory Board.

Marc Rosenbaum **Energysmiths**

P.O. Box 194
Meriden, NH 03770
603-469-3355
FAX: 603-469-3855
mjr@valley.net

Energysmiths offers design, engineering, consulting services, and training on sustainable systems. He is a member of the ARC Design Group, is on the EBN Advisory Board, and has expertise in energy efficient design and solar energy utilization.

Other Consultants

Paul Fiset

Building Material Technology &
Management
University of Massachusetts-Amherst
Natural Resources Center
Holdsworth, Room 126
Amherst, MA 01003
413-545-1771
pfiset@forwild.umass.edu
<http://www.umass.edu/bmatwt>

He is the director of Building Material Technology at UMass-Amherst. He is also on the EBN Advisory Board.

Howard Associates

P.O. Box 1007
Upper Marlboro, MD 20773
410-867-8000
FAX: 301-889-0889
<http://www.nrg-builder.com/greenbld.htm>

Through their Building Environmental Science and Technology (BEST) division, they provide customized consulting services for builders, developers, architects, engineers, city planners, and manufacturers on environmentally high performance building and remodeling. They have consulted for state, local, and federal agencies. See info. on their Green Building Primer in the Books and Guides section.

Paul Leveille

54 Portsmouth Street
Concord, NH 03301
603-224-9047 x309
FAX: 603-228-0423
leggsoid@aol.com
<http://www.spnhf.org>

He offers design education, drafting services, green building and home tours, research, materials consulting, and slideshows.

Steven Winter Associates

50 Washington Street
Norwalk, CT 06854
203-857-0200
FAX: 203-852-0741
swinter@mail.snet.net
<http://members.aol.com/swinteraso/>

The firm specializes in innovative building materials and technologies for energy-efficient, resource-friendly, and healthy buildings.

What's Working

57 Acorn
Boulder, CO 80304
303-444-7044
FAX: 303-444-7013
Contact: David Johnston, President

This consulting firm specializes in energy and environmental program development and environmental construction.

IV. DESIGN SPECIFICATIONS MANUALS

This section contains listings for some of the most widely utilized sustainable building design specification manuals. Other specification manuals exist; we have listed the documents cited most frequently by policy makers interviewed for this project.

Design Specifications and Standards

GreenSpec

Kalin Associates, Inc., 1996
154 Wells Ave.
Newton, MA 02159
617-964-5477
\$135

Green Spec is a set of model specifications for environmental sustainability. It contains model specifications language for specific products, in CSI format. The downloadable diskette is included.

Resourceful Specifications

(formerly called Green Spec)

by Larry Strain
Siegel & Strain Architects, 1997
1295 59th Street
Emeryville, CA 94608
Available from:
Alameda County Recycling Board
510-614-1699
\$35

Resource Specifications is subtitled as Guidelines Specifications for Environmentally Considered Building Materials & Construction Methods. The manual provides guideline specs for each material category, not model specs for specific products. It comes in loose leaf; comes with Mac or PC diskette.

Model Energy Code (MECcheck)

U.S. Department of Energy
800-270-CODE
<http://www.energytech.pnl.gov:2080/bsgp>

This is a collection of manuals, worksheets, and software designed to demonstrate compliance with the Model Energy Code. The manual and software can be downloaded for free from the Building Standards and Guideline Program website (listed above).

WasteSpec

Triangle J Council of Governments
P.O. Box 12276
Research Triangle Park, NC 27709
919-549-0551
FAX: 919-549-9390
\$28

Waste Spec is subtitled as Model Specifications for Construction Waste Reduction, Reuse and Recycling. Published in 1995, this comprehensive specifications manual includes a helpful introductory section, waste specifications organized in CSI format covering all CSI divisions, and appendices that cover such topics as preparing estimates on recycling, contacts of state recycling coordinators, and further green building resources. *Waste Spec* is a great resource for waste reduction, reuse, and recycling, but does not cover the utilization of green building materials, energy efficiency, indoor air quality or water conservation issues. It comes with disc version.

V. PRODUCT INFORMATION

This section contains product related resources such as selected vendor directories, materials suppliers, and product certification systems. This is an especially selective listing of a huge field within sustainable building. No specific products are listed; instead venues such as directories, databases, and suppliers are listed.

Vendor Directories and Databases

Directory of Recycled-Content Building and Construction Products

MATERIALS
EFFICIENCY
INDOOR

Clean Washington Center, 1994
2001 Sixth Avenue, Suite 7200
Seattle, WA 98121
206-464-7298
<http://www.cwc.org>
FREE

The Clean Washington Center is formerly a division of the Washington State Dept. of Trade and Economic Development, and has recently received independent, non-profit status. This comprehensive directory was published when the Center was still a government entity, and is organized in CSI (Construction Specifications Institute) format and has somewhat of a Northwestern focus, but does include national vendors and manufacturers. It also includes references to other green building resources and the EPA Recycled Product Content Guidelines.

1998 Energy Products Directory: The Sourcebook for Commercial Buildings

EFFICIENCY
MATERIALS
TECHNICAL

Cutter Information Corp., 1997
37 Broadway
Arlington, MA 02174-5552
781-641-5118
FAX: 781-648-1950
<http://www.cutter.com/energy/>
\$40

Over 2,000 products are listed from over 1,000 manufacturers. *The Energy Products Directory* covers all major categories of energy efficiency products for industrial and commercial buildings, including controls, lighting, heating, ventilation, and energy storage systems.

Green Building Resource Guide

MATERIALS
EFFICIENCY
INDOOR
TECHNICAL

John Hermannsson, AIA
The Architectural Machine, 1996
PO Box 3808
Redwood City, CA 94064
<http://greenguide.com/about.html>
\$34.95 reference book
\$89.95 CD-ROM

The Architectural Machine is a database of over 600 green building product and materials, which passed evaluations for performance and utility, as well as for environmental features. The guide contains Price Index Numbers, which relate the price of each specific product to other products in the same category.

Interior Concerns Resource Guide

*INDOOR
MATERIALS*

Victoria Schomer, Editor
Interior Concerns Publications, 1994
P.O. Box 2386
Mill Valley, CA 94942
415-389-8049
FAX: 415-388-8322
\$40

Interior Concerns is a directory of environmentally sensitive and low-toxic alternative products, including low-VOC carpeting, interior finishes, and furnishings. The focus of the guide is specifically on toxicity issues. Updated periodically. See Sustainable Building Organizations and Website sections.

McRecycle USA Program

*MATERIALS
EFFICIENCY
INDOOR*

McDonalds Corporation, Environmental
Affairs Department, 1998
McDonalds Plaza
Oak Brook, IL 60521
630-623-3784
FAX: 630 623 5779
FREE

The McDonalds Corporation compiled this directory of products on recycled content building materials, many of which they routinely use in building their restaurants. It is available in bound form or as a region-specific database.

METRO Guide to Recycled Products- Building and Construction

*MATERIALS
EFFICIENCY*

METRO (Regional Planning Govt.), 1995
600 NE Grand Avenue
Portland, OR 97232
503-797-1650
FAX: 503 797 1795
FREE

This comprehensive guide covers only recycled products, not all categories of environmentally preferable construction materials. There are a lot of Oregon suppliers, but also many national vendors. Vendors whose claims of recycled content have been certified (by a third party) are identified as such.

National Park Service Sustainable Design and Construction Database

*LAND USE
EFFICIENCY
MATERIALS
INDOOR
TECHNICAL*

Sally Small, Editor
National Park Service
P.O. Box 25287
Denver CO 80225
<http://www.nps.gov/dsc/dsgncnstr/>

The Park Service has put together this enormous database of sustainable building product broken down by general categories (energy efficiency, water conservation, etc.). It contains over 1300 product listings from more than 550 manufacturers, listings for over 7,000 recyclers of construction and demolition debris, and a comprehensive list of other resources and contact information.

The entire database can be downloaded from the above web address, recently updated to version 2.0 with expanded contents, improved search capability, and reduction of hard drive space needed.

**Recycled Products Guide--
Massachusetts Department of
Environmental Protection**

*MATERIALS
EFFICIENCY
MASSACHUSETTS*

Massachusetts Department of
Environmental Protection (DEP)
One Winter Street, 4th Floor
Boston, MA 02108
800-267-0707
FREE

This listing of recycled products focuses on those products available from Massachusetts manufacturers.

**The Resource Guide to Sustainable
Landscapes**

*LANDSCAPING
TECHNICAL
MATERIALS*

Wesley A. Groeseck and Jan Striefel
Environmental Resources, Inc., 1994
2041 East Hollywood Avenue
Salt Lake City, UT 84108-3148
801-485-0280
\$28

This landscaping guide is a helpful tool to use while planning out climate appropriate landscaping and the selection of environmentally sound landscape products.

Green Building Material Suppliers

EcoSmart Building Centers

*NORTHEAST
TECHNICAL
EFFICIENCY
MATERIALS
INDOOR*

40 Wall Street
New York, NY 10005
888-326-7606
FAX: 888-326-7607
<http://www.ecosmart.com>
Contact: Nic Denyer
ndenyer@ecosmart.com

These are showrooms of environmental products, integrated systems, and advanced technologies. One is in NYC; the other is in San Francisco.

Environmental Construction Outfitters (ECO)

*MATERIALS
TECHNICAL
EFFICIENCY
NORTHEAST*

44 Crosby Street
New York, NY 10012
212-334-9659, 800-238-5008
FAX: 212-226-8084

ECO provides state-of-the-art environmental building products, services, and technologies to architects, designers, contractors, and owner-builders. Orders can be shipped anywhere in the U.S.

Nontoxic Environments, Inc.

*MATERIALS
INDOOR
EFFICIENCY*

6135 NW Mountain View Drive
Corvallis, OR 97330
503-781-6892

The *Nontoxic Environments* catalog carries a wide assortment of nontoxic and environmental preferable building materials, including insulation, floor coverings, lighting, water treatments, etc.

Real Goods

*EFFICIENCY
MATERIALS
TECHNICAL*

966 Mazzoni Street
Ukiah, CA 95482
800-762-7324
FAX: 707-468-0301

Real Goods puts out the definitive catalog of alternative energy products, including water and air treatments for buildings, and energy efficient lighting.

Resource Conservation Technology, Inc.

*EFFICIENCY
MATERIALS
TECHNICAL*

2633 North Calvert Street
Baltimore, MD 21218
301-366-1146
FAX: 410-366-1146

Resource Conservation Technology, Inc. is a supplier of energy efficient building construction products gaskets, insulation, etc. Detailed fact sheets are available on most products.

Product Certification Systems

Green Cross / Scientific Certification Systems (SCS)

1939 Harrison Street, Suite 400
Oakland, CA 94612
510-832-1415
FAX: 510-832-0359
<http://www.scs1.com>

CSC is an independent testing and labeling organization that conducts life-cycle assessments of products in many different industries. Their labels include information on the environmental impact of each product. They have a Forest Conservation Program that studies forest management practices used for wood products.

Green Seal

1730 Rhode Island Ave. NW
Washington, D.C. 20036-3101
202-331-7337
FAX: 202-331-7533
<http://www.greenseal.org>

Green Seal is a non-profit that identifies products and services (many of which are building related) that are environmentally sound and awards them a "Green Seal of Approval" certification mark (a blue globe with a green check). They publish a series of industry-specific Green Buying Guides, which include information on how to develop and implement an environmentally sound purchasing policy.

VI. INTERNET RESOURCES

While many of the resources listed in other sections of this guide have websites, the sites listed in this section were generally selected because their content goes beyond just a description of the organization. Many of the selected sites provide educational and practical information on sustainable building issues, i.e. through reports or links to other sites or project case studies.

Electronic Mailing Lists

Greenbuilding E-mail Discussion Group

<http://www.crest.org/sustainable/greenbuilding-list-archive/>

To join, type "subscribe greenbuilding" in the body of your message to this e-mail address:

majordomo@crest.org

Cosponsored by the Environmental Building News, Oikos, and CREST; this forum has 400 participants.

GreenClips News Service

<http://www.crest.org/environment/greenclips/>

Archives of summaries of recent articles in the media on sustainable building design, published every two weeks.

To subscribe, send an e-mail message to: **GreenClips-**

request@listserv.energy.wsu.edu

Type "subscribe greenclips <your e-mail address>" in the body of the message

Websites

American Institute of Architects (AIA) Committee on the Environment (COTE)

*TECHNICAL
IMPLEMENTATION
CASE STUDIES*

<http://www.e-architect.com>

On the website, go to the Professional Interest Area page and then to the COTE Home Page. Site contains sections on: Building Case Studies, Conferences and Events, Design Charrettes, Healthy Buildings, Publications, etc.

See Professional Associations section of this directory.

Audubon House Homepage

CASE STUDY

<http://www.audubon.org/nas/ah>

The organization's new headquarters in Manhattan underwent an historic and green restoration and renovation, achieved at market rates using readily available technology

(NOTE: Even closer to home, the Massachusetts Audubon Wildlife Sanctuary Visitor Center in S. Wellfleet has also been built in an environmentally-sustainable manner.)

Construction & Demolition (C&D) Waste

*CASE STUDIES
TECHNICAL
MATERIALS*

<http://www.cdwaste.com/>

This group is based in Canada, but the site also contains C&D information for other countries.

CREST (Center for Renewable Energy and Sustainable Technology)

*GENERAL
CASE STUDIES
IMPLEMENTATION*

<http://www.crest.org>
<http://solstice.crest.org>

This site is particularly good for information on energy efficiency. It includes the content of the Greening of the White House CD-ROM.

E Design Online: The Journal of Sustainable Design and Planning

*GENERAL
CASE STUDIES
EFFICIENCY*

<http://edesign.state.fl.us/fdi/e-design/online/edo.htm>

E-Design is a journal of selected essays and articles reprinted from other sources. Includes sections on: Sustainability, Building Commissioning, Hi-Performance Buildings, Calendar, Features, etc.

Environmental Building News

*GENERAL
EFFICIENCY
MATERIALS
INDOOR*

<http://www.ebuild.com>

EBN's site includes articles, reviews, news stories, Events Calendar, links to other sites, etc. from the leading periodical on sustainable design and construction. Also see Periodicals section.

G.E.O. Green Building Resource Center

*GENERAL
CASE STUDIES
LANDSCAPING*

<http://www.greendesign.net>

This site is a comprehensive source of internet links, direct book ordering, listing of green building professionals, etc.

Green Building Challenge '98

*PUBLIC
GENERAL
CASE STUDIES
EFFICIENCY
MATERIALS
INDOOR*

<http://www.eren.doe.gov/buildings>
<http://www.greenbuilding.ca/gbc98>

See Federal Programs section.

Green Building Information Council

*GENERAL
TECHNICAL
EFFICIENCY*

<http://greenbuilding.ca/>

See Organizations section

ICLEI Green Buildings Program

*GENERAL
CASE STUDIES
EFFICIENCY*

<http://www.iclei.org/iclei/grnbuild.htm>

The International Council of Local Environmental Initiatives' Green Buildings program focuses on reducing energy consumption in municipal buildings; its Energy Smart Cities Initiative is being funded by the EPA. Participating cities include Chicago, New York, Milwaukee, Minneapolis, and Toronto.

Interior Concerns Environmental Resources

*CONCEPTUAL
CASE STUDIES
EFFICIENCY
MATERIALS*

<http://www.interiorconcerns.org>

This site includes newsletters, case studies, resource guide, links, etc.
See Sustainable Building Organizations section.

IRC Information Service: Green Architecture

*CONCEPTUAL
CASE STUDIES
EFFICIENCY
LAND USE
INDOOR*

<http://www.cisti.nrc.ca/irc/irccontents.html>

The National Research Council of Canada's Institute for Research in Construction's list of publication, organizations, databases, etc. related to green architecture. As of 1998, all references were at least three years old.

Oberlin's Environmental Studies Center

CASE STUDY

<http://www.oberlin.edu/~envs>

This site provides great visual and textual explanations of the sustainable design and building of the Center, which is now in progress and is being coordinated by Professor David Orr.

Oikos: Green Construction Source

*GENERAL
EFFICIENCY
MATERIALS*

<http://www.oikos.com>

This is a very comprehensive and well-organized site. It includes the *REDI Guide*: an extensive searchable database of green building products, materials, and vendors; lots of links, and an on-line bookstore.

Residential Environmental Design/ Sustainable Architecture

*GENERAL
MATERIALS*

<http://www.reddawn.com/>

The site contains sections on: Building Materials Reviews, Green Architects on the East Coast, Bulletin Board, Bookstore, Articles, links, etc.

Rocky Mountain Institute

*CONCEPTUAL
TECHNICAL*

<http://www.rmi.org/gds/index.htm>

See Related Organizations section.

Sustainable Architecture, Building, and Culture

*GENERAL
MATERIALS*

<http://www.west.net/~prince/main.htm>

This site is maintained by Prince Associates Architects. It contains: a Calendar of Events, Links, Environmental Consultants, Ecological Materials, Periodical and Resource Guides sections.

Sustainable Building Sources

*GENERAL
CASE STUDIES
EFFICIENCY
MATERIALS
LAND USE
INDOOR*

<http://www.greenbuilder.com>

The site contains a lot of general information on sustainable building. It has several good links to other sites, and includes information on the City of Austin's Green Builder program.

U.S. Dept. of Energy, Center of Excellence for Sustainable Development

*LAND USE
EFFICIENCY
MATERIALS*

<http://www.sustainable.doe.gov/>

This is a good networking place for government and private-sector initiatives. The site contains the entire Sustainable Building Technical Manual, which can be downloaded.
See Federal Programs section.

U.S. Dept. of Energy Office of Building Technology State and Community Programs

*PUBLIC
TECHNICAL
CASE STUDIES
EFFICIENCY*

<http://www.eren.doe.gov/buildings/>

The site includes sections on building programs, rating systems, codes/ordinances, etc.
See Federal Programs section.

U.S. Green Building Council

*CASE STUDIES
GENERAL*

<http://www.usgbc.org>

See Sustainable Building Organizations section.

VII. PERIODICALS

This section lists periodicals such as magazines, newsletters, and journals that are either dedicated to sustainable building in general, or one aspect of sustainable building (such as indoor air quality), or that regularly feature articles on sustainable building. It is by no means an exhaustive list, but rather a diverse list of some of the most well known periodicals in the field.

PERIODICALS

Building With Nature

*TECHNICAL
INDOOR
MATERIALS*

Carol Venolia, Editor
Bi-monthly newsletter
P.O. Box 4417
Santa Rosa, CA 95402
707-579-2201
\$35

This professional newsletter focuses on the creation and maintenance of nontoxic indoor environments.

E Build Library CD-ROM: Environmental Building News

*GENERAL
TECHNICAL
EFFICIENCY
EFFICIENCY
MATERIALS
INDOOR
LANDSCAPING*

Alex Wilson, Nadav Malin, Editors
E Build, annual diskette
(Refer to Environmental Building News listing in this section for EBN's address, phone, and website.)
\$165

E-Build includes all of the back issues of EBN on disc in full text; includes search engines and many enhancements in 1998 update.

EcoDesign: A Design Journal for Health and the Environment

*CONCEPTUAL
TECHNICAL
INDOOR
MATERIALS*

Bryan Harrison, Editor
Quarterly magazine
EcoDesign Resource Society
P.O. Box 3981, Main Post Office
Vancouver, BC V6B 374 Canada
604-738-9334
FAX: 604-738-9334
\$35 *

A subscription to journal comes in a package with membership in the society, which is \$35 for subscribers outside of Canada. Glossy format, but articles have substance, integrating technical information and advocacy of environmental values in design.

ENR: Engineering News Record

*TECHNICAL
MATERIALS
EFFICIENCY*

Howard Stuffman, Editor
Weekly magazine
1221 Ave. of the Americas
New York, NY 10020
212-512-2000
\$74

Occasional "Focus on Environment" section includes technical information on sustainable building issues and products, with a bend towards the scientific background of the materials and techniques discussed.

Environment By Design

*MATERIALS
TECHNICAL
EFFICIENCY*

David Rousseau, Kim Leclair, Editors
Biannual loose-leaf
PO Box 95016
South Van CSC
Vancouver, BC V6P 6V4, Canada
604-945-2017
\$40

Environment by Design reviews the environmental and health merits of materials and products used in construction. It could be considered a directory, except for the fact that it is frequently updated. The evaluators use standardized criteria from the categories of production, packing/shipping, and installation/use to evaluate products in a clear and concise manner.- great as a quick reference tool.

Environmental Building News (EBN)

*GENERAL
TECHNICAL
EFFICIENCY
MATERIALS
INDOOR
LANDSCAPING
CASE STUDIES*

Bi-monthly newsletter.
RR 1, Box 161
Brattleboro, VT 05301
802-257-7300
FAX: 802-257-7304
<http://www.ebuild.com>
\$95 (\$60 for individuals and companies with less than 25 employees)

EBN is a compact, informative newsletter on all aspects of environmentally-

responsible design and construction; includes feature articles, news, product reports, book reviews, and construction details. It is one of the most established green building periodicals.

**Environmental Building News-
Selected Reading List**

*GENERAL
TECHNICAL
EFFICIENCY
MATERIALS
INDOOR
LANDSCAPING
CASE STUDIES*

Annual update of *EBN's* choices of the best publications on environmentally sustainable design and construction.
(See EBN listing.)
\$12

The reading list is separated into sections based on type of resource and topic, gives all pertinent publication information and description of featured publication.

Green Builder News

*GENERAL
CONCEPTUAL
TECHNICAL*

Bi-monthly newsletter
City of Austin, Environmental and
Conservation Services Dept.
206 East Ninth Street, Suite 17.102
Austin, TX 78701
512-499-3500
FAX: 512-499-2859
Free

This is the newsletter for the City of Austin's Energy Star and Green Builder Programs (see Local Programs and Case Study).

**Indoor Air Review, The Newspaper of the
Indoor Air Quality Industry**

*INDOOR
TECHNICAL
MATERIALS*

Dennis Melamed, Editor
monthly newspaper
IAQ Publication, Inc.
4520 East-West Highway, Suite 610
Bethesda, MD 20814
301-913-0115
FAX: 301-913-0119
\$72 for yearly subscription

The Review contains sections on major IAQ issues such as lead, radon, etc. It stands apart from other IAQ publications in that it covers political and business news surrounding the scientific and technical issues.

Landscape Architecture

*LANDSCAPE
LAND USE*

Anne Elizabeth Powell, Editor
Monthly magazine
American Society of Landscape Architects (ASLA)
P.O. Box 753
Waldorf, MD 20604-0753
800-787-2752
FAX: 301-843-0159
\$44

ASLA's official publication is a highly illustrative, impeccably designed magazine for landscape architects, but contains a wealth of information on environmentally sound and ecosystem appropriate design.

NESUN

*NORTHEAST
MASSACHUSETTS
EFFICIENCY
MATERIALS*

Northeastern Sustainable Energy Association (NESEA)
Michael Grabscheid, Editor
quarterly magazine
23 Ames Street
Greenfield, MA 01301
413-774-6051
\$35*

The magazine comes in a package with the membership fee of \$35. NESUN focuses specifically on energy efficiency and related materials, and contains more information on light than heavy construction.

Rocky Mountain Institute Newsletter

*GENERAL
CONCEPTUAL
TECHNICAL
LAND USE
EFFICIENCY
MATERIALS*

L. Hunter Lovins, Editor
Quarterly newsletter.
1739 Snowmass Creek Road
Snowmass, CO 81654-9199
970-927-3851
FAX: 970-927-4178
<http://www.rmi.org>
(full text available online)

The RMI newsletter contains incredibly current, diverse articles on green building, its policy and projects. The articles are as interesting as they are informative, and the full text on line version is available at no cost.

Solar Today

EFFICIENCY

*TECHNICAL
MATERIALS
CASE STUDIES*

Maureen McIntyre, Editor
Bi-monthly magazine.
American Solar Energy Society
2400 Central Avenue G-1
Boulder, CO 80301-2843
303-443-3130
\$29

Solar Today is the ASES official publication; contains a wide scope of information on solar industries and technologies, with a significant focus on building design and construction.

VIII. BOOKS AND GUIDES

This section contains a diverse listing of books and guides on sustainable building. Some of the listed resources are general guides, others are especially technical for builders, and many are some place in between. Descriptions of each resource reflect the degree of technical information and/or special focus. This is not an exhaustive list.

BOOKS AND GUIDES

Audubon House: Building the Environmentally Responsible Energy-Efficient Office

*CASE STUDY
IMPLEMENTATION
TECHNICAL
EFFICIENCY
MATERIALS*

National Audubon Society and Croxton Collaborative
John Wiley and Sons, Inc.
605 Third Avenue
New York, NY 10158-0012
800-225-5945
FAX: 908-302-2300
\$24.95

This chronicle of the Audubon House restoration includes detailed technical information and background research. Also included is a step by step description of the process that went into remodeling the headquarters.

Construction Waste and Demolition Debris Recycling – A Primer

*PRIVATE
PUBLIC
TECHNICAL
MATERIALS
IMPLEMENTATION*

Solid Waste Association of America, 1993
P.O. Box 7219
Silver Spring, MD 20907-7219
301-585-2898
\$45

This thorough guide to C&D recycling including planning issues, implementation opportunities and potential markets associated with the diversion of C&D. Applicable to both municipal and private programs.

Construction and Demolition Waste Recycling Guide

*MATERIALS
TECHNICAL*

Bureau of Sanitation, City of Los Angeles
Integrated Solid Waste Management Office
433 South Spring Street, 5th Floor
Los Angeles, CA 90013
213-847-1444
FAX: 213-847-3054
FREE

The guide gives a very thorough analysis of C&D recycling; also includes list of companies that recover recycled materials from construction sites

Emerging Energy Technologies

*EFFICIENCY
TECHNICAL
MATERIALS
MASSACHUSETTS*

Cutter Information Corp, 1997
37 Broadway
Arlington, MA 02174-5552
781-641-5118
FAX: 781-648-1950
\$95

This comprehensive report covers energy technologies of the near future, including current state of development and contact information. Among other subjects, the book covers fuel cells, high-speed flywheels, metal hydride, and Stirling generators.

Energy Design Handbook

*EFFICIENCY
TECHNICAL
INDOOR
IMPLEMENTATION*

Donald Watson, Editor
AIA Press, 1993
1735 New York Avenue NW
Washington, DC 20006
Available from:
AIA Ritzoli
800-272-4115
\$29.95

This incredibly comprehensive guide for technical professionals cover all aspects of building design to maximize energy efficiency. It addresses climate and site issues, passive heating and cooling systems, proper shading and daylighting. Later chapters cover more advanced technologies such as active solar systems and the new generation of photovoltaics.

Includes approaches to energy and economic analysis, such as life cycle cost analysis.

Environmental Resource Guide

*GENERAL
TECHNICAL
CASE STUDIES
MATERIALS
EFFICIENCY*

Joseph Demkin, Editor
Annual loose-leaf
John Wiley and Sons
605 Third Avenue,
New York, NY 10158-0012
800-225-5945
FAX: 908-302-2300
\$195

The *ERG* is a comprehensive practical guide that reports on project case studies, materials' performance, materials' life cycle impacts, and specifications.

Green Architecture: A Guide to Sustainable Design

*CASE STUDIES
CONCEPTUAL
MATERIALS
EFFICIENCY
LAND USE
LANDSCAPING*

Michael Crosbie
American Institute of Architects Press, 1994
1735 New York Avenue NW
Washington, DC 20006
800-365-2724
\$39.95

This beautifully book is suitable for the coffee table but is actually a compilation of 43 projects by 14 architects representing various types of green building in North America. It is complete with design philosophies and mission statements from the architecture firms featured.

Green Building Business Reports

*PUBLIC
CASE STUDIES
IMPLEMENTATION
GENERAL
TECHNICAL (FINANCE)*

Report I- 1998 Status and Forecast in
Green Building: Commercial and Private
Sectors

Report II- 1998 Status of Green Building
Programs: Municipal Sector

Ekoloji, Ltd., 1998

885 Third Avenue, Suite 2900

New York, NY 10022

212-829-5642

FAX: 212 829 5643

\$295/report or \$395 for both (limited time offer); quantity discounts available

Report I covers the green building market itself, including market trends, prospects for growth, and important sectors. Contains expert interviews. Geared for investors. Report II briefly summarizes the green building initiatives of most active cities- includes description of guidelines, projects, and gives contact information.

Green Development: Integrating Ecology and Real Estate

*GENERAL
TECHNICAL
EFFICIENCY
MATERIALS
LAND USE
CASE STUDIES*

Wiley Series in Sustainable Design, 1997

Alex Wilson, Jen Uncapher , Lisa

McManigal, and L. Hunter Lovins

John Wiley and Sons

605 Third Avenue

New York, NY 10155-0012

212-850-600

FAX: 212-850-6088

Available from <http://www.amazon.com>

\$54.95

Green Development is a broad, up to date, and national overview of the movement to green land use and new construction. Sections on technological innovation and operational efficiency of sustainable construction show the movement to be cost effective as well as environmentally preferable to the status quo. Illustrative case studies of model sustainable building projects and programs; companion CD-ROM included.

Guide to Resource Efficient Building Elements (GREBE)

*MATERIALS
EFFICIENCY
GENERAL*

Center for Resourceful Building

P.O. Box 3423

Missoula, MT 59806

406-549-7678

\$28

This is a comprehensive source of information on specific building materials, vendors; it includes product evaluations

based on broad criteria. It also contains information on job-site recycling and resource efficient design. Updated annually.

Guiding Principles of Sustainable Design

*CONCEPTUAL
GENERAL
LAND USE
EFFICIENCY
IMPLEMENTATION*

National Park Service Technical
Information Center, 1993
Denver Service Center
Denver, CO 80225
303-969-2100
\$11

The NPS wrote this book for National Park facilities, but it is applicable to all large facility planning and designing. The book incorporates critical land use issues, such as the retention of biodiversity near large building sites, with in depth information on green construction, operation, and maintenance. Contains a very useful charts that outline issues such as common environmental impact associated with building and construction, preservation of cultural resources, and maintenance requirements of construction materials.

Howard Associates' Green Building Primer

P.O. Box 1007
Upper Marlboro, MD 20773
410-867-8000
FAX: 301-889-0889
<http://www.nrg-builder.com/greenbld.htm>

A primer written by Bion Howard, former builder and environmental scientist, based on work done for ASTM, US EPA Energy Star Homes, and others. Can order

through website. See Consultants section.

Landscape Ecology Principles in Landscape Architecture

*LANDSCAPING
CASE STUDIES
TECHNICAL*

Wenche E. Bramstad, James D. Olson,
Richard T. Forman
Island Press, 1996, 80 pages
P.O. Box 7
Covelo, CA 95428
800-828-130
FAX: 707-983-6414
<http://www.islandpress.org>
\$17.95

Key principles of climate and terrain appropriate landscaping are explained concise and understandable manner in this compact guide. Includes 14 case studies where various landscape ecology principles were applied to projects that otherwise would have had significant environmental impacts, and shows how the application of the principles abated such impacts.

The Local Government Sustainable Buildings Guidebook: Environmentally Responsible Building Design and Management

*PUBLIC
IMPLEMENTATION
EFFICIENCY
MATERIALS
CASE STUDIES*

U.S. Green Building Council and U.S. EPA
Office of Administration and Resource
Management, 1994.

\$18 to government; \$50 to others.

<http://pti.nw.dc.us/store/envpubs.html>

Overview of construction and renovation
strategies for municipal buildings; identifies
existing plans, projects, and references.

The Passive Solar Design and Construction Handbook

EFFICIENCY
TECHNICAL
CASE STUDIES
MATERIALS

Steven Winter Associates, 1998
Published by John Wiley and Sons
605 Third Avenue
New York, NY 10158-0012
800-225 -5945
FAX: 908-302-2300
\$65

This updated, well illustrated book from the
1980s includes a wealth of new information
on energy design software and high-tech
glazings. It includes design details and
case studies.

Permaculture: A Designer's Manual

LANDSCAPING
TECHNICAL

Bill Mollison
Published by Tagari Publications, 1997
Order from Rodale Institute Bookstore
611 Siefried Road
Kutztown, PA 19530
800-832-6285
FAX: 610-683-8548
ribooks@rodaleinst.org
\$45

Permaculture is a large, thorough resource
on ecologically appropriate landscaping in
all types of landscapes and climates.

A Primer on Sustainable Building

GENERAL
TECHNICAL
EFFICIENCY
MATERIALS
LAND USE

Diana Lopez Barnett, William D. Browning
Rocky Mountain Institute, 1995
1739 Snowmass Creek Road
Snowmass, CO 81654-9199
970-927-3851
FAX: 970-927-4178
\$16.95

This primer is an introduction to and
overview of sustainable building practices
on both the conceptual and practical level.
It features illustrative, entertaining
examples of real life experiences in the
green building business.

The Professional's Green Building Guide

GENERAL
IMPLEMENTATION
CASE STUDIES
CONCEPTUAL
EFFICIENCY

Ramsey Zimmerman, Green Building
Project Manager
North Carolina Recycling Association, 1997
7330 Chapel Hill Road, Suite 207
Raleigh, NC 27607
919-851-8444
FREE

This step-by-step, pragmatic guide to green building was the capstone project of the North Carolina Green Building Initiative, but is universally applicable. The guide reviews the conceptual basis for sustainable building, concentrates on facilitated design planning, site selection, and architect and contractor selection. It also covers funding strategies, monitoring, and troubleshooting. It is a guide for the policy maker trying to orchestrate and understand the green building process, and does not go in depth into technical issues.

**Resource Efficient Building:
Reducing Materials Use, Toxicity,
and Waste in Design and Construction**

*IMPLEMENTATION
GENERAL
EFFICIENCY
MATERIALS
INDOOR*

WRITAR, LHB Engineers and Architects
and the Center for Residential Building
Technology, March 1995
4600 West 77th Street, Suite 302
Minneapolis, MN 55435
612-832-8971
Available from: LHB Engineers
612-338-2029
FREE

This is a thorough yet easy-to-read guide to that covers many of the bases that other books on green building do not cover, namely: how to get a green building project off the ground by defining goals appropriately and how to work with clients, suppliers and contractors effectively. Includes handy, quick reference fact sheets and a useful bibliography with further resources.

**The Resource Guide to Sustainable
Landscapes and Gardens, Third Edition**

*LANDSCAPING
MATERIALS
TECHNICAL
EFFICIENCY*

Wesley A. Groesbeck, Jan Striefel
Environmental Resources, Inc., 1996
2041 East Hollywood Ave.
Salt Lake City, UT 84108
801-485-0280
\$35

Part One is a general primer on selecting appropriate landscaping techniques and materials according to climate. Part Two is a large listing of resource efficient products with a major focus on landscaping, organized in CSI, 16 division format.

**The Sourcebook for Sustainable Design:
A Guide to Environmentally Responsible
Building Materials and Processes**

Andrew St. John, AIA, Editor
Boston Society of Architects, 1992
52 Broad Street
Boston, MA 02109
617-951-1433
FAX: 617-951-0845
\$25

The *Sourcebook* is organized in CSI 16-division format, with manufacturer and distributor listings included. Each division has an introduction and summary to introduce people to the different issues associated it, such as the varnishes used on wood or the technology associated with electricity efficiency. The *Sourcebook* also contains a great index of other resources and materials suppliers.

The Sustainable Building Sourcebook

GENERAL
TECHNICAL
EFFICIENCY
MATERIALS

ECSD Green Builder Program
206 East Ninth Street, Ste. 17.102
Austin, TX 78701
512-499-3504 or –3500
FAX: 512-499-2859
<http://www.greenbuilder.com>
\$25

This *Sourcebook* is being revised this year (1998). Created for the City of Austin Green Builder Program, it includes chapters on water, energy, building materials, and solid waste. It contains design, materials, and construction specifications for new and existing buildings.
See case study in Volume I.

**Sustainable Building Technical Manual:
Green Building Design, Construction,
and Operations**

David Gottfried, Annette Osso, Editors
Public Technology, Inc., 1996
Order from: U.S. Green Building Council
1615 L Street NW, Suite 1200
Washington, DC 20036
202-778-0760
FAX: 202-463-678
<http://www.usgbc.org>
\$74
Complete manual also can be downloaded
from US DOE: www.sustainable.doe.gov

This manual contains step-by-step guidelines to resource-efficient building. Produced by the U.S. Dept. of Energy, Public Technology, Inc., the U.S. Green Building Council, and the U.S. Environmental Protection Agency, the manual is both broad and in depth.

**Sustainable Communities:
A New Design Synthesis for Cities,
Suburbs, and Towns**

CONCEPTUAL
GENERAL
LAND USE
EFFICIENCY

Sim Van der Ryn and Peter Carthorpe,
Authors
San Francisco: Sierra Club Books, 1991
2034 Filmore Street
San Francisco, CA 94115
415-977-5500
Also available through:
<http://www.amazon.com>
\$20

This collection of incredibly well written essays by esteemed planners provides a background primer to the theory of sustainable land use and construction. It places sustainable building issues within a larger context of related social watersheds: the rise of an information economy, ecological awareness, concerns about agribusiness and urban food supply, etc. It contains detailed case studies of “ideal” urban and suburban areas, however, this is not a book to be read for technical information, but more as an exercise in synthesizing and communicating a philosophy on sustainable building.

Water Efficient Technologies: A Catalog for the Residential/ Light Commercial Sector

*EFFICIENCY
TECHNICAL
MATERIALS*

Colin Laird
Rocky Mountain Institute, 1991
1739 Snowmass Creek Road
Snowmass, CO 81654
970-927-3851
FAX: 303-927-4178

This “catalog”, which is not really a traditional catalog per se, is complete guide to water-conserving plumbing fixture and irrigation systems. It contains photos, detailed product descriptions, listings of product reviews and supplier contact information for every product listed.

STAYING CURRENT...

While all of the resources listed in this guide have much to offer, we realize that very few people will have the time to look into all of them. Furthermore, information and resources in the field of sustainable building change rather rapidly. In order to keep abreast, we recommend checking the following websites regularly and keeping in touch with the following organizations. (All of the contact information can be found in the guide.)

- **Environmental Building News (EBN or E-Build)**
- **U.S. Green Building Council**
- **CREST or Solstice**
- **G.E.O. Green Building Resource Center**
- **Oikos: Green Construction Source**
- **Sustainable Sources**
- **AIA Committee on the Environment**
- **Rocky Mountain Institute**

We would also like to call special attention to a few of the resources within the borders of Massachusetts that you may want to take advantage of:

Architects for Social Responsibility (ASR) group, Boston Society of Architects
(see Professional Associations section)

Northeast Sustainable Energy Association (NESEA), Greenfield
(see Related Organizations section)

Massachusetts Institute of Technology, Department of Architecture, Andrew Scott, Cambridge (see University Research Programs section)

Center for Sustainable Building & Technology, Cambridge
(see Sustainable Building Organizations section)

Sustainable Boston initiative
(see Local Programs section)

The Conservation Consortium, Yarmouth Port
(see Related Organizations section)

Gerard Ives Architects, Boston
(see Architects section)

Timeless Architecture, Henry MacLean, Boston
(see Architects section)

Sustainable Strategies, Andrew St. John, Essex
(see Architects section)

